

-22°F | HEAT+®
UP TO 18 SEER2

ArcticFlex

by **BLUE RIDGE**
HEATING & AIR
ENGINEERED COMFORT SOLUTIONS

Central Heat Pump System with
Side Discharge Condenser



Performance in
heating down to



100 % Capacity to 4°F

BUILT TO PERFORM IN THE MOST CHALLENGING ENVIRONMENTS

Introducing the ArcticFlex with Heat+® technology from Blue Ridge Heating & Air, an HVAC system that harnesses advanced technology to deliver unwavering reliability, ensuring your home or business stays perfectly comfortable across a broad range of climate extremes.

HIGH EFFICIENCY

At full capacity, the rated efficiency of the ArcticFlex system boasts up to 18 SEER2 and 10 HSPF2, which is very efficient. But much of what makes its operating costs so low cannot be measured by a simple standardized test.



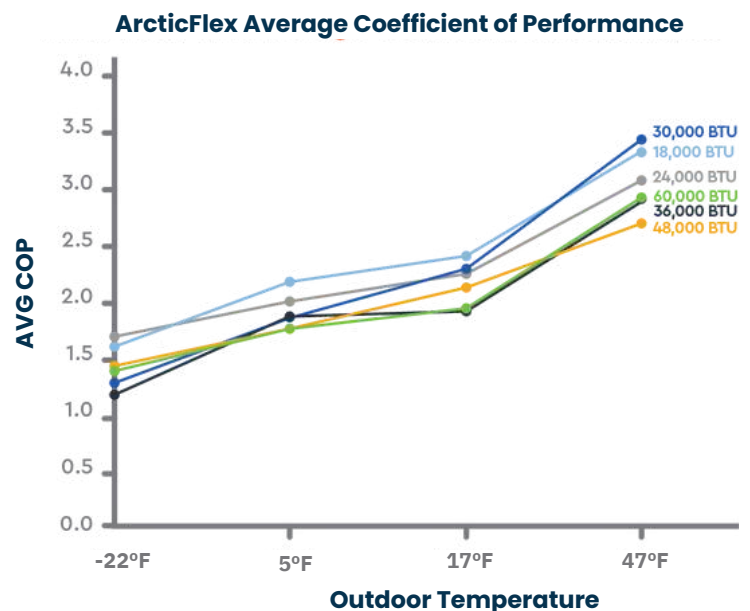
Unlike traditional HVAC equipment that's either ON full power or OFF, the ArcticFlex fully modulating inverter compressor varies its capacity (and electric power consumption) relative to demand at any given moment. As a result, it runs longer at something far less than full power most of the time. That not only reduces energy bills, it also decreases normal equipment wear and tear through a significant reduction of on/off cycles. This functionality also increases comfort by maintaining even temperatures consistently.

HEAT+® PERFORMANCE

Typical heat pumps, inverter or not, begin to lose heating capacity at just 40°F. The colder it gets outside, the more those systems rely on supplemental electric resistance heat (KW strip) to meet the heating demand. Not the ArcticFlex system though. Thanks to its patented Heat+® design, it will deliver 100% of its rated heat capacity down to 4°F using only the compressor, which is two to three times more efficient on average than using electric backup heat alone. The energy savings this delivers is very significant, but difficult to measure on any standardized test. The system doesn't even use electric strip heat during defrost cycles like traditional heat pumps and will operate at nearly 60% of capacity down to -22°F outside.

HEAT+® 100 % Capacity to 4°F

Coefficient of Performance (COP) of a heat pump is the ratio between the rate at which the heat pump transfers thermal energy (in kW), and the amount of electrical power required to do the work (in kW). For example, if a heat pump used 1 kW of electrical energy to transfer 3 kW of heat, the COP would be 3. Between -5°F & 32°F, the ArcticFlex system with High Heat+® achieves an efficiency of 1.5-3.0 times greater than electric resistance heat.



POWER BOOST MODE

The inverter drive in the ArcticFlex system works differently than others. Instead of slowly ramping up when the heating or cooling demand significantly changes, it shifts into overdrive mode to quickly get the temperature back to setpoint before settling into its ideal operating speed. This allows for quick corrections to the temperature in the space. With an overdrive burst that **nearly doubles its capacity***, the power is there when you need it.

**60Hz is the default electrical frequency of the US power grid. The ArcticFlex's inverter drive converts the power to direct current (DC) and can multiply it to as much as 110 Hz in cooling and 120 Hz in heating.*



BULLETPROOF OPERATION

The ArcticFlex works differently than many other HVAC systems. Onboard sensors interact with an advanced Electronic Expansion Valve (EEV) to monitor internal temperatures and pressures, allowing the system to automatically react and self-adjust for a healthy compressor. It also has many automatic failure prevention sequences. For example, the condenser fan runs backwards for 30 seconds periodically to clear itself of debris. It will also pause to run various self-diagnostic functions if needed to prevent a fault. It even has a heated base pan to prevent ice accumulation from plugging its internal drains. Other benefits come from its robust construction, like a water and fireproof e-box capped with a metal plate, where sensitive electronics are housed. There are many more examples like these that make the ArcticFlex one of the most durable and reliable HVAC systems on the market.

HIGH STATIC FAN

The ArcticFlex air handler has a powerful indoor fan motor rated up to .8 IWC static pressure, which is strong enough to handle the requirements of most manufactured and modular homes.

MULTI-POSITIONAL

The air handler or add-on coil can be installed in an upflow, downflow, or horizontal L/R position to suit your needs, no conversion kit required.

DUAL FUEL COMPATIBLE

The ArcticFlex outdoor unit is compatible with a new or existing gas furnace* when paired with the Blue Ridge Heating & Air CUB series factory matched AHRI rated coil. There are four different cabinet sizes available, designed to fit popular industry-standard furnace dimensions.

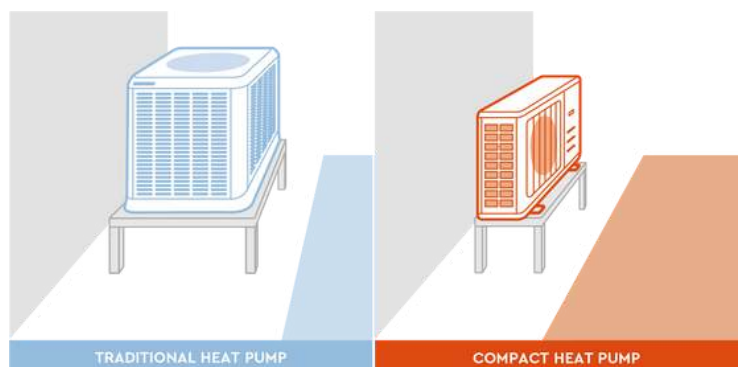
**Not all furnaces should be retrofitted. The furnace age and type of blower must be considered. It is recommended that the blower be equipped with an energy efficient ECM motor.*

RETROFIT FLEXIBLE

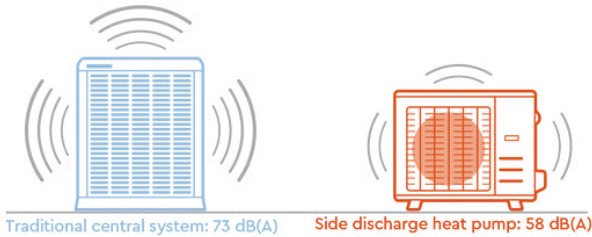
The system comes with accessories to allow for line set connections to be made via braze, flare or mechanical press fittings. Existing line sets may be reused provided they are cleaned and size-verified by a professional (see installation instructions for piping detail.) Terminations on the equipment are in common 3/8-3/4 or 3/8-7/8 sizes, depending on the model.

SMALL FOOTPRINT

ArcticFlex compact side discharge condenser is up to 40% smaller than traditional heat pumps. The small size and more forgiving installation clearances offer greater flexibility for installation with a more aesthetically pleasing finished look.



WHISPER QUIET OPERATION



Installing on a patio or near a bedroom window? No problem! The ArcticFlex heat pump has a decibel rating (db) as low as 57. Compare that to many typical HVAC systems on the market today that operate in the 70-75 db range. It's the difference of hearing the pleasing sound of soft conversation versus the sound of traffic from a sidewalk.

UNIVERSAL THERMOSTAT COMPATIBLE

Although the ArcticFlex system comes with a smart thermostat included in the box, you are not required to use it. It is compatible with most universal 24-volt thermostats available on the market today! Select universal models feature an advanced dehumidification mode that is compatible with the ArcticFlex system.



REMOTE CONTROL WITH FOLLOW ME® FUNCTION INCLUDED

The ArcticFlex system comes with a multi-purpose remote control in the box. The user can assign temperature sensing to the remote instead of the thermostat on the wall. Keep the remote close by to ensure comfort wherever you are. The remote also doubles as a technician's service tool for advanced diagnostics and prompting remote commands. No internet connection required.

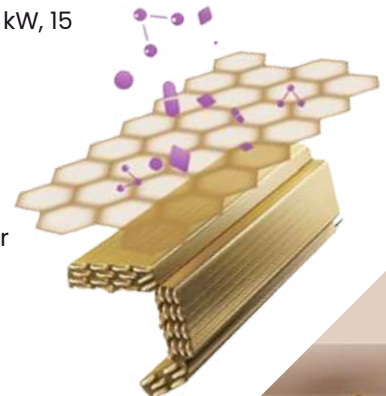


OPTIONAL EMERGENCY HEATING KIT

Backup heating kits designed for the ArcticFlex air handler are available in 5 kW, 8 kW, 10 kW, 15 kW & 20 kW.

ENHANCED CORROSION PROTECTION

Extra protection is standard on the ArcticFlex system. Aluminum heat exchange fins on both the indoor and outdoor unit components have an electrically bonded **Gold Fin™** hydrophilic coating, which is more resistant to degradation from oils, salt, acid, and other environmental contaminants than bare aluminum or ordinary blue fin coatings. It can also efficiently prevent bacteria from propagating on fin surfaces to help maintain a healthier indoor environment. Fasteners on the ArcticFlex heat pump are made of stainless steel.



FILTER RACK

A durable filter rack is included on the ArcticFlex air handler, which accepts standard filter sizes available at most retail stores nationwide. The filter door is tool less, secured by strong magnets. Filters: 1.5 & 2 ton = 16x20, 2.5, 3 & 4 ton = 20x20, 5 ton = 24x20.

LEADING WARRANTY

Professional installations receive a limited 10-Year Parts/10-Year Compressor warranty with a 2-Year Major Component Failure/Unit Replacement option. Registration is not required.



TECHNICAL SPECIFICATIONS

HEAT PUMP SYSTEM		18,000 BTU*	24,000 BTU*	30,000 BTU*	36,000 BTU*	48,000 BTU*	60,000 BTU*
Indoor Model		FMA18HIAHUU230X7	FMA24HIAHUU230X7	FMA30HIAHUU230X7	FMA36HIAHUU230X7	FMA48HIAHUU230X7	FMA60HIAHUU230X7
Outdoor Model		DMA18HOS20230E7	DMA24HOS20230E7	DMA30HOS20230E7	DMC36HOS20230E7	DMA48HOS20230E7	DMA60HOS20230E7
HEAT+® Technology		Yes	Yes	Yes	Yes	Yes	Yes
Power Supply (V/Ph/Hz)		208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
Cooling	Capacity (BTU/h)	18,000 (6,880~21,000)	24,000 (6,400~27,000)	30,000 (10,000~33,600)	35,000 (14,000~38,000)	47,000 (15,000~48,000)	55,000 (14,000~56,000)
	EER2 (BTU/Wh)	12.4	11.7	10.0	11.7	8.2	8.8
	SEER2 (BTU/Wh)	18.0	17.4	16.2	16.3	15.6	15.3
Heating	Capacity (BTU/h)	19,000 (2,800~21,000)	24,000 (10,100~31,000)	33,000 (11,500~37,000)	39,000 (11,000~48,000)	50,000 (11,000~55,000)	59,000 (13,400~69,000)
	COP2 (W/W)	3.64	3.35	3.30	3.40	3.15	3.42
	HSPF2 Region 4 (BTU/Wh)	9.3	10.0	8.9	9.5	9.4	9.4
Max. fuse (outdoor) (A)		20	35	35	35	50	50
Compressor type		Twin Rotary	Twin Rotary	Rotary	Rotary	Rotary	Rotary
Indoor air flow (Hi/Mi/Lo) (CFM)		576.47/529.41/488.24	758.82/694.12/629.41	894.12/805.88/711.76	1082.35/970.59/864.71	1282.35/1094.12/905.88	1582.35/1358.82/1135.29
Indoor noise level (Hi/Mi/Lo) (dB(A))		34/31/30	39/36/33	42/40.5/36.5	49/44/42	50/47/43.5	51/45.5/41.5
Indoor Unit	Width x Depth x Height (in)	21.02x17.52x45.00	21.02x17.52x45.00	21.02x21.02x49.02	21.02x21.02x49.02	21.02x21.02x49.02	21.02x24.49x52.99
	Net/Gross weight (lbs)	105.82/129.41	105.60/127.43	129.19/155.64	129.19/155.64	130.51/156.31	162.70/192.90
Outdoor fan motor	Number of fans	1	1	1	1	2	2
	Speed (min/mid/max r/min)	800/700/580	950/700/500/400	950/900/500	850/800/750/650/550	850/750/650	850/750/650
Outdoor noise level (dB(A))		57.0	62.0	60.5	65.0	64.0	63.5
Outdoor Unit	Width x Depth x Height (in)	35.04x13.46x26.50	37.24x16.14x31.89	37.24x16.14x31.89	38.58x14.76x38.39	37.48x16.34x52.48	37.48x16.34x52.48
	Net/Gross weight (lbs)	102.95/109.79	136.69/145.50	159.83/169.75	203.71/234.57	220.24/248.90	239.86/271.61
Refrigerant precharge (ft)		25	25	25	25	25	25
Refrigerant piping	Liquid side/Gas side (in)	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4	3/8 / 3/4
	Max. refr. pipe length (ft)	98.42	164.04	164.04	213.25	213.25	213.25
	Max. difference in level (ft)	65.62	82.02	82.02	98.42	98.42	98.42
Moisture removal (L/h)		1.67	1.98	3.41	3.65	4.96	5.55
Thermostat type		Wired Control	Wired Control	Wired Control	Wired Control	Wired Control	Wired Control
Room temp.	Indoor (cooling) (°F)	60~90	60~90	60~90	60~90	60~90	60~90
	Indoor (heating) (°F)	32~86	32~86	32~86	32~86	32~86	32~86
	Outdoor (cooling) (°F)	5~122	5~122	5~122	5~122	5~122	5~122
	Outdoor (heating) (°F)	-22~75	-22~75	-22~75	-22~75	-22~75	-22~75

HEAT PUMP + ADD ON COIL		18,000 BTU*	24,000 BTU*	30,000 BTU*	30,000 BTU*	36,000 BTU*	36,000 BTU*	48,000 BTU	60,000 BTU
Indoor Model		CUB24HAC20BWT7A	CUB24HAC20BWT7A	CUB36HAC20BWT7A	CUB36HAC20CWT7A	CUB36HAC20BWT7A	CUB36HAC20CWT7A	CUB48HAC20CWT7A	CUB60HAC20DWT7A
Outdoor Model		DMA18HOS20230E7	DMA24HOS20230E7	DMA36HOS20230E7	DMA30HOS20230E7	DMC36HOS20230E7	DMC36HOS20230E7	DMA48HOS20230E7	DMA60HOS20230E7
HEAT+® Technology		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cooling	Capacity (BTU/h)	18,000 (6,880~21,000)	24,000 (6,400~27,000)	29,000 (13,000~33,600)	30,000 (9,900~35,000)	36,000 (11,700~40,000)	35,000 (11,700~40,000)	46,000 (16,500~47,000)	53,000 (13,400~54,000)
	EER2 (BTU)	11.7	10.7	10.0	10.5	10.0	10.0	8.6	8.6
	SEER2 (BTU)	16.1	16.5	15.2	15.5	15.5	15.2	14.3	14.5
Heating	Capacity (BTU/h)	19,000 (5,900~23,600)	25,000 (8,500~28,000)	31,000 (8,000~34,000)	33,000 (9,000~37,000)	38,000 (9,200~45,000)	39,000 (9,200~45,000)	51,000 (25,000~59,000)	55,000 (10,800~60,000)
	COP2 (W/W)	3.35	3.32	3.18	3.5	3.18	3.18	3.04	3.08
	HSPF2 Region 4 (BTU/Wh)	9.5	9.5	8.5	9.7	8.6	10.0	9.0	8.6
Indoor Unit	Width x Depth x Height (in)	17.52x20.98x17.99	17.52x20.98x17.99	17.52x20.98x23.58	20.98x20.98x23.98	17.52x20.98x23.58	20.98x20.98x23.98	20.98x20.98x23.98	24.49x20.98x27.99
	Net/Gross Weight (lbs)	42.77/52.03	42.77/52.03	60.19/69.00	66.58/77.16	60.19/69.00	66.58/77.16	66.58/77.16	86.64/98.33



100 % Capacity to 4°F



SERIAL NOMENCLATURE



SN: 2400898120232190130118

3219

Equipment Production Date

3: 2023

2: February, A: October, B: November, C: December

19: 19th



Performance in
heating down to



100 % Capacity to 4°F

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